Remarks

Claims 1-13 are pending in this application. No new matter has been added as a result of the above amendment.

Drawings

The Examiner objects to Figure 1 due to it disclosing a sequence without having a proper SEQ ID NO identification. Specifically, the Examiner indicates that Applicant previously filed an amendment requesting insertion of SEQ ID NO identification on page 7. Applicant believes that they requested this insertion on page 8 in the previous response filed on September 30, 2004. However, Applicant again requests the same amendment.

Rejection of claims 1-13 are rejected under 35 USC 102(b)

Claims 1-13 are rejected under 35 USC 102(b) as being anticipated by Brown-2 et al. (Biochemistry, v34 (1995) pp 14765-74) as evidenced by Chen et al. (Methods in Enzymology (1996) v. 275, pp. 503-520). Applicant respectfully disagrees.

The Examiner asserts that "Brown-2 teaches using QB replicase, producing randomized RNA libraries and selecting RNAs. Specifically, Brown-2 teaches RNA from the mixed sequence population was used to initiate the QAB(+S1) selection and incubated with QB replicase and buffer. Those RNAs that [*bind*] the replicase were separated from the nonbound RNAs by filtering the binding reaction through a prewet nitrocellulose filter ... The filter was then wasted and the selected RNAs were removed from the filter and reverse transcribed, PCR amplified and transcribed using primers. Brown further teaches a QB ... selection ..."

The Examiner continues and states that "Chen clearly teaches that nitrocellulose filtration preferentially retains RNA that is bound to proteins ... Chen teaches that the method is used with much success and is both fast and convenient ..."

Section 102 of Title 35 provides the novelty requirements for patentability. In order for a prior art reference to anticipate a claim it must teach each and every element of that claim. M.P.E.P. §2131. The Court of Appeals for the Federal Circuit states:"[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628 (CAFC, 1987).

Moreover, it is axiomatic in patent law that if an independent claim defines allowable subject matter then the claims depending therefrom also define allowable subject matter. *In re* Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), and Hartness International, Inc. v. Simplimatic Engineering Co., 819 F.2d 1100, 1108, 2 USPQ2d 1826, 1831 (Fed. Cir. 1987). Given that the rejected claims depend from base claims and those independent claims define allowable subject matter, then the claims at issue must necessarily define allowable subject matter. The reasons for allowability of the base claims are set forth above.

The presently claimed invention discloses a method of making replicatable RNA templates which have a high affinity to a heterogenous target through iterative steps. *Unlike* Brown and Chen, the presently claimed invention employs one or more heterogenous target molecules used to screen the RNA templates - importantly, these target molecules are *covalently linked* to a polymerase. For example, the Examiner is directed to page 4 the first full paragraph - beginning on line 23 it reads, *sic* "[t]he target is bound to or incorporated in one or more subunits [*referring to the subunits of the polymerase*]." Continuing on line 24, ... the target is a protein the nucleic acid encoding such target is cloned into the nucleic acid encoding such subunit [*again referring to a subunit of the polymerase*] and expressed as part of such subunit." So unlike the cited art, the target in the claimed invention refers to a molecule that is actually a part of the polymerase. Claim 1 clearly reflects the present invention by including this limitation.

The selection for the claimed invention is based upon affinity between an RNA replicatable template (*e.g.*, RNA) and the heterogenous target (*e.g.*, a nucleic acid). In

Brown-2, the selection process is "identical" to the SELEX process (see p. 14766, 2nd para of Brown-2). This clearly distinguishes Brown-2 from the presently claimed invention as the claimed invention is significantly different from the SELEX process. Specifically, the target molecule in the instant invention as claimed is covalently integrated within the polymerase unlike the SELEX process.

Brown and Chen fail to teach each and every element of the claimed invention, thus, they can not serve as a 102(b) prior art reference defeating the novelty of the present invention as claimed. Therefore, Applicant respectfully request reconsideration and withdrawal of the present rejection.

Rejection of claims 1-13 are rejected under 35 USC 103(a)

Claims 1-13 are rejected under 35 USC 103(a) as being unpatentable over Chen et al. Applicant respectfully disagrees.

The Examiner states that [*sic*] "Chen et al. ... teaches a method for generating specific oligonucleoide inhibitors of viral polymerases. Chen specification teaches inhibitory templates by selection of RNA molecules replicates by QB replicase ... Chen teaches that the newly synthesized minus strand and the original plus strand both serve as templates for complementary strand synthesis in a second round of replication. Chen teaches that a RNA repertoire is generated, and replicatable RNAs are selected. Chen does not specifically teach in the analysis of QB performing in vitro selection method to select oligonucleotides that bind to a target protein based on the affinity enrichment of the RNA pool. However, the beginning of the Chen articles teaches four general in vitro selection methods to select oligonucleotides that bind to a target protein based on the affinity enrichment of the RNA pool ... Chen teaches that with nitrocellulose filtration in SELEX, ..."

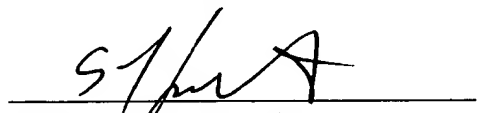
In order to establish a *prima facie* case of obviousness, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to

combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references) must teach or suggest all of the claim limitations." M.P.E.P. §2143, see also, *In re* Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Chen fails to teach or suggest the presently claimed invention. As stated above, the target molecule is covalently bound to the polymerase in the presently claimed invention. This limitation is neither taught nor suggested by Chen. Chen relies upon SELEX which is clearly different from what is presently claimed. Moreover, as the Examiner adroitly pointed out, Chen fails to teach affinity enrichment of RNA as claimed in the present invention. This is a significant failure of Chen which is not rectified by the recitation of general methods which appear to refer to SELEX. It is important to distinguish SELEX from the presently claimed invention. Applicant respectfully requests reconsideration and withdrawal of the present rejection.

Applicant believes that his claimed invention is now in condition for allowance and respectfully requests that the Examiner issue a Notice of Allowance. The Examiner is invited to call the undersigned attorney at (617) 854-4237 should she determine that a telephonic interview would expedite prosecution of this case.

Respectfully submitted,



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Date: 3/2/05